

CLAIMS

What is claimed is:

1. Method for signing an object comprising the steps of:
taking a snapshot of the object wherein the snapshot represents the object
at a point of execution;
associating a signature with said snapshot;
maintaining said association between said snapshot and said signature.
2. The method of claim 1 further comprising the steps of:
verifying said signature;
constructing a new object using said snapshot, when said signature is
verified.
3. The method of claim 1 further comprising the steps of:
storing said snapshot in another object;
storing said signature in said another object.
4. The method of claim 1 further comprising the steps of:
monitoring the status of said snapshot;
invalidating said signature when the status of said snapshot changes.
5. The method of claim 1 further comprising the step of creating said
signature using said snapshot.
6. The method of claim 5 further comprising the step of associating a
second signature with said snapshot.

7. The method of claim 6 further comprising the steps of:
verifying said second signature;
constructing a new object using said snapshot, when said second signature is verified.

8. Method for sealing an object comprising the steps of:
generating an encryption key;
taking a snapshot of the object, wherein the snapshot represents the object at a point of execution;
generating an encrypted snapshot;
deleting said snapshot.

9. The method of claim 8 further comprising the step of associating a signature with said snapshot.

10. The method of claim 9 further comprising the steps of:
verifying said signature;
constructing a new object using said snapshot, when said signature is verified.

11. An article of manufacturing comprising:
a computer usable medium having computer readable program code embodied therein for signing an object comprising:
computer readable program code configured to cause a computer to take a snapshot of the object wherein the snapshot represents the object at a point of execution;

Serial No. 09/607,514

computer readable program code configured to cause a computer to associate a signature with said snapshot;

computer readable program code configured to cause a computer to maintain said association between said snapshot and said signature.

12. The article of manufacture of claim 11 further comprising:

computer readable program code configured to cause a computer to verify said signature;

computer readable program code configured to cause a computer to construct a new object using said snapshot, when said signature is verified.

13. The article of manufacture of claim 11 further comprising:

computer readable program code configured to cause a computer to store said snapshot in another object;

computer readable program code configured to cause a computer to store said signature in said another object.

14. The article of manufacture of claim 11 further comprising:

computer readable program code configured to cause a computer to monitor the status of said snapshot;

computer readable program code configured to cause a computer to invalidate said signature when the status of said snapshot changes.

15. The article of manufacture of claim 11 further comprising computer

readable program code configured to cause a computer to create said signature using said snapshot.

Serial No. 09/607,514

16. The article of manufacture of claim 11 further comprising computer readable program code configured to cause a computer to associate a second signature with said snapshot.

17. The article of manufacture of claim 16 further comprising:
computer readable program code configured to cause a computer to verify said second signature:

computer readable program code configured to cause a computer to construct a new object using said snapshot, when said second signature is verified.

18. An article of manufacturing comprising:
a computer usable medium having computer readable program code embodied therein for sealing an object comprising:

computer readable program code configured to cause a computer to generate an encryption key;

computer readable program code configured to cause a computer to take a snapshot of the object, wherein the snapshot represents the object at a point of execution;

computer readable program code configured to cause a computer to encrypt said snapshot;

computer readable program code configured to cause a computer to delete said snapshot.

19. The article of manufacture of claim 18 further comprising computer readable program code configured to cause a computer to decrypt said encrypted snapshot.

20. The article of manufacture of claim 18 further comprising computer readable program code configured to cause a computer to associate a signature with said snapshot.

21. The article of manufacture of claim 20 further comprising:
computer readable program code configured to cause a computer to verify said signature; and
computer readable program code configured to cause a computer to construct a new object using said snapshot, when said signature is verified.

22. A system configured to sign an object comprising:
a first module of program code executing on a computer configured to take a snapshot of an object wherein the snapshot represents the object at a point of execution;
a second module of program code executing on said computer configured to generate a signature using said snapshot;
said first module configured to monitor the status of said snapshot, and to invalidate said signature when said snapshot is changed.

23. The system of claim 22 wherein said first and second modules are implemented as a second object.

24. The system of claim 23 wherein said snapshot and said signature are stored in said second object, said second object limiting access to said snapshot through one or more methods of said second object.

25. The system of claim 24 wherein said one or more methods of said second object invalidate said signature when said access modifies said snapshot.

26. The system of claim 22 further comprising a sealing module comprising:

- a key generation module configured to generate an encryption key;
- an encryption module configured to generate an encrypted snapshot from said snapshot;
- a deletion module configured to delete said snapshot.

27. The system of claim 26 wherein said second object is configured to invoke said key generation module, said encryption module and said deletion module.

28. The system of claim 27 wherein said second object is configured to verify said signature and construct a new object using said snapshot when said signature is verified.